



Safe to Eat Workgroup (STEW) Meeting Notes



Wednesday, October 18, 2023
9:30 AM - 12:00 PM (Pacific)

[Link to Meeting Slides](#) | [Link to Meeting Recording](#)

Agenda Overview

Item	Topic	Lead	Time
1.	Roll Call, Agenda Review, Goals of the Meeting	Jay Davis	9:30 AM (10 min)
2.	Information: Quick Updates Desired Outcome: Inform and update the STEW	Jay Davis	9:40 AM (20 min)
3.	Information: 2023 Sampling and Analysis Update Desired Outcome: Inform and update the STEW	Jay Davis, Autumn Bonnema	10:00 AM (20 min)
4.	Information: Final Monitoring Plan for 2024 Desired Outcome: Inform and update the STEW	Jay Davis	10:20 AM (20 min)
Break			10:40 AM (10 min)
5.	Information: Biomonitoring California PFAS Update Desired Outcome: Inform and update the STEW	Kelly Chen	10:50 AM (25 min)
6.	Information: Bioaccumulation Monitoring Program Realignment Update Desired Outcome: Inform and update the STEW	Anna Holder	11:15 AM (10 min)
7.	Discussion: 2024 Long-term Monitoring Priorities Assessment Process Desired Outcome: Inform, get feedback from the STEW INCLUDED PRE-MEETING ACTION ITEM	Anna Holder	11:25 AM (20 min)
8.	Discussion: 2024 STEW Meeting Dates Desired Outcome: Inform, get feedback from the STEW	Anna Holder	11:45 AM (10 min)
9.	Wrap-up and Adjourn	Anna Holder	11:55 PM (5 min)

Agenda Details

Item 1. Roll Call, Agenda Review, Goals of the Meeting

Discussion

- See [slides](#) (5-6) and [recording](#) for full discussion

Program/STEW Leads

Anna Holder (SWAMP)
Jay Davis (SFEI)

Peer Review Panel

Harry Ohlendorf (Independent)

OEHHA

Loren Chumney
Huyen Tran (Tran) Pham
Wesley (Wes) Smith

MLML/MPSL

Autumn Bonnema
Billy Jackl
Scot Lucas

Regional Boards

R1:
R2: Gerardo Martinez
R3:
R4: Emily Duncan
R5: Jordan Robbins
R6: Kelly Huck, Laurie Scribe
R7:
R8: Heather Boyd
R9: Chad Loflen

State Board

OIMA/SWAMP

Leah Benton
Chad Fearing
Tessa Fojut
Sydney Rilum
Jennifer Salisbury

Water Quality Monitoring Council

Nick Martorano (OIMA/SWAMP)
Peter Vroom (City of San Diego's Public
Utilities Department)

Other

Kathleen Attfield (Biomonitoring California)
Emily Beglarian (CA Dept. of Public Health)
Kelly Chen (Biomonitoring California)
Bridgette DeShields (SF Bay RMP, Chair of
TRC, Integral Consulting Inc.)
Monica Hiner (Tolowa Dee-ni' Nation)
Duyen Kauffman (Biomonitoring California)
Alan Marr (Orange County Environmental
Health)
Lauren Valentino (City of San Diego)
Nerissa Wu (Biomonitoring California)
+ 2 unidentified participants

Item 2. Quick Updates

- See [slides](#) (6-11) and [recording](#) for full discussion
- 2020 Coast data and report
 - Data status: all data have been processed; except 3 PCBs samples sent to SGS-Axys for analysis in Mar 2022.
 - Report status: The [Cruise Report](#) is complete. We will be pushing the data report to 2025 after the remainder of the coast has been sampled (2024) and data processed (2025).
- 2021 Bass lakes (Panel 4) data and report
 - Data status: Metals/Other/Age data are processed; waiting on organics data from SGS-Axys.
 - Report status: The [Cruise Report](#) is complete; draft data report will be distributed once organics data have been received, and discussed at following STEW Meeting.

- 2022 Monitoring data
 - Realignment (Project code: SWB_Realign_RWB9_2022):
 - Waiting for organics data.
 - Report status: The [Cruise Report](#) is complete
 - Rivers (Project code: SWB_FishRiv_2022):
 - Awaiting Crustacean As/Se results.
 - Waiting for organics data.
 - Report status: The [Cruise Report](#) is complete.
 - Central Coast Region (RWB3) Monitoring (Project code: RWB3_SS_BOG (2022)):
 - Waiting for organics data.
- New fish consumption advisories
 - [El Capitan Reservoir \(San Diego County, Sep 2023\)](#)
 - *Coming soon:* South Lake (Inyo County)
- Updates on TMDLs
 - [Delta Methylmercury TMDL](#): Central Valley Regional Board staff are preparing to submit the TMDL for scientific peer review in the next couple of months, during which time the TMDL will be made publicly available.
- Monitoring Council Updates
 - Next [Council meeting](#) will be Dec 14 - Hybrid, In person location Southern CA
 - Main theme of meeting is microplastics
 - Will include a STEW Update focused on Realignment & 2024 Long-term Monitoring Priorities Assessment activities
 - Announcements of agendas shared through to the [Council email list](#)
 - Upcoming [Equity Workgroup](#) meetings: Nov 1, 2023 and Feb 7, 2024 - Virtual
 - Looking for more attendees and a new co-chair
- Other updates from the group
 - Congratulations to Wes Smith, who has replaced Susan Klasing as OEHHA's [Fish, Ecotoxicology and Water Section](#) Lead!
 - [California Aquatic Bioassessment Workgroup \(CABW\)](#) and the California Chapter of the Society of Freshwater Science (Cal-SFS) Annual Meeting; Nov. 6-7, 2023, Costa Mesa, CA
 - San Francisco Bay RMP
 - Sport fish monitoring in 2024 - planning process starting soon
 - [2023 RMP Annual Meeting](#) - PFAS in Bay Fish talk and other materials available on website
 - San Francisco Bay consumption survey questionnaire development
 - Funded by San Francisco Region, project will wrap around May 2024
 - Workshop to develop the first draft of questionnaire with Community-Based Organizations on Nov 3

- [All Positives Possible](#) Carquinez Strait monitoring study
 - Funded by US EPA
 - Fish monitoring for mercury, PCBs, PFAS at four locations began in Sep 2023.
 - Monitoring methods will include San Francisco Bay RMP methods and collection by community members.

Action Items

- Jay/Anna: Distribute draft 2021 Bass lakes (Panel 4) data and report to STEW email list when ready (after we receive organics data)
- Jennifer: Follow-up with Jay, Autumn & Anna regarding SGS-Axys 2021 data import & QAPP questions

Item 3. 2023 Sampling and Analysis Update

2023 sampling took place between Apr. and Sep. according to the [2023 Lakes Monitoring Plan](#). An overview of completed sampling and update on analysis status and accomplishments will be provided.

Discussion

- See [slides](#) (12-18) and [recording](#) for full discussion
- Sampling crews were able to collect 1,700 fish at 35 lake sites for Bass Lakes Panel 5 - the final round of the 10 year monitoring plan.
 - Monitoring also included the majority of requested additions (locations & species)
 - See the [Catch Summary](#) for full collection details
- Crews experienced some challenges with collecting at certain locations (e.g., land managers prevention of access to site locations, rain and snow made it difficult to access some sites).
- Apr monitoring start date, high water levels, and lower water temperatures and conductivity enabled use of the electrofish method for collection, which is more efficient than other methods. Not recommended to start before Apr, to ensure fish are samplable.
- Sample processing and analysis is underway
 - 96% of samples have been processed
 - 177 composites created of anticipated total of 184
 - 653 individuals created of anticipated total of 681
 - 35% of samples have been analyzed and reported to SWAMP
 - 348 mercury analyses reported of anticipated total of 813
 - 0 selenium reported of anticipated total of 185, but many have been digested
 - Organics samples hopefully shipping before end of Nov

Action Items

- MPSTL: Continue processing and analyzing samples, ship organics, and write up Cruise Report
- Anna: Post & distribute Cruise Report via STEW email list, Mar 2024

Item 4. Final Monitoring Plan for 2024

This group has been discussing the monitoring plan for 2024 in some capacity since Jan. 2021. An update on the intended 2024 coast monitoring plan will be provided.

Discussion

- See [slides](#) (19-30) and [recording](#) for full discussion
- For more detailed presentation of monitoring plan, see Jul 2023 STEW Meeting [recording](#) and [notes](#)
- Overview of [Statewide Coastal Screening Survey](#) efforts
 - Round 1 - 2009 - 2010 ([Report](#))
 - Round 2 - planned for 2018-2020 ([Monitoring Plan](#)); actual monitoring in:
 - 2018: Southern California Bight and some Central Coast stations, [Cruise Report, Publication](#)
 - 2019: Humboldt bay and Santa Cruz stations
 - 2020: Central and part of the North Coast, [Cruise Report](#)
 - 2024: North Coast and remainder of Central Coast
- Summary of key elements of the sampling design (Table 12 in Monitoring Plan)

		Primary Target Species			
Region	Number of Zones	Coast	Bays and Harbors	Analytes	Replicate Composites within Zones
North Coast	15	Gopher Rockfish Black Rockfish Blue Rockfish Lingcod Cabezon Salmon	Shiner Surfperch White Surfperch Leopard Shark California Halibut	Mercury Selenium PCBs Dioxins	No
Central Coast	20	Gopher Rockfish Brown Rockfish Blue Rockfish Lingcod Salmon White Croaker Rainbow Surfperch	Brown Rockfish Shiner Surfperch Leopard Shark California Halibut Jacksmelt White Croaker	Mercury Selenium PCBs	No

- Feedback and requests received from CA Dept. of Public Health, from consumption survey results obtained through the Biomonitoring California Asian/Pacific Islanders Community Exposures (ACE) Project.

Action Items

- All: STEW Monitoring Plan comments and requests due Oct 31
- Jay: Finalize Monitoring Plan by Nov 30
- Anna: Post & distribute final monitoring plan, Dec
- MPSL: Finish collection permit application
- Anna: Schedule & coordinate Kick-off meeting for Feb/Mar 2024

Item 5. Biomonitoring California PFAS Update: PFAS exposures and fish consumption among Asian/Pacific Islanders in the San Francisco Bay Area

This presentation describes distributions of per- and polyfluoroalkyl substances (PFAS) serum data and fish consumption from the Asian/Pacific Islander Community Exposures (ACE) Project. PFAS data showed detections in 100% of participants and was compared to National Health and Nutrition Examination Survey (NHANES) 2015-2016 data and risk-based levels for PFASs issued by the National Academies of Sciences, Engineering, and Medicine. Additional information on fish species and associated habitats, purchased vs. caught fish, and consumption of non-filet fish parts will be reported and contextualized within national fish consumption data, San Francisco sport fish monitoring on PFAS, and fish consumption advisories. These data have highlighted opportunities in California to work in partnership with other agencies and organizations on reducing PFAS exposures through fish consumption.

Discussion

- See [slides](#) (32-65) and [recording](#) for full discussion
- Asian/Pacific Islander Community Exposures (ACE) Project included blood and urine analysis of metals and PFAS as well as an exposure questionnaire from 100 Chinese American participants in San Francisco (ACE 1, 2016) and 100 Vietnamese American participants, mostly in San Jose (ACE 2, 2017)
- Key findings on PFAS and consumption of fish and shellfish
 - Top five PFAS detected: PFOS, PFHxS, PFUdA, PFOA, PFNA
 - Serum levels in ACE 1 and ACE 2 that were higher than 2015-2016 *National Health and Nutrition Examination Survey (NHANES): PFOS, PFUdA, PFNA
 - ACE participants have a disproportionately higher risk of health effects of PFAS exposures; more than double the NHANES percentage
 - Exposure questionnaire results
 - Participants reported consuming fish they bought or caught - 47 and 14 unique species, respectively, as well as 10 unique shellfish species
 - Overall seafood consumption (fish and shellfish) was higher than NHANES survey - 59% of participants reported consuming seafood at least twice per week
 - ACE data shows there is a high consumption of fish parts (eyes, fish head, organs, skin), whereas fish consumption advisories recommend only eating fish filets.

- When [San Francisco Bay RMP 2019 PFOS Study](#) results were compared to other state PFAS Fish Consumption guidance - nearly all PFOS concentrations found in fish samples fell within concentration ranges that would have triggered other states' PFAS fish consumption advisories.
- Future Biomonitoring CA analysis with ACE data around the following research questions:
 - Is there a difference in PFASs between people who eat self-caught fish vs. not?
 - Is there a difference in PFASs between people who eat freshwater fish, migratory fish, and marine fish?
 - Is there a difference in PFASs between people who eat fish parts vs. not?
- Resources shared in the chat:
 - Barbo et al (2023) [Locally caught freshwater fish across the United States are likely a significant source of exposure to PFOS and other perfluorinated compounds](#) (also available on the [STEW Relevant Literature Page](#))
 - [Biomonitoring California PFAS results page](#)
- Questions
 - Did the ACE surveys include questions about where participants are fishing?
 - The ACE surveys asked about habitats (e.g. coastal areas, freshwater bodies), but did not include questions about specific waterbodies.
 - Will the future research questions be limited to ACE data?
 - Yes - Biomonitoring CA expects to be able to share those results in the next year or so.
 - Are there plans for additional future PFAS biomonitoring?
 - Biomonitoring CA has been studying PFAS in CA populations since 2011 as part of their California Regional Exposure Studies (CARES), recent examples include: Los Angeles (2018), eastern and southeastern CA (2019), San Diego and Orange County (2020), pregnant populations, firefighters
 - Future work: Orange County & Fresno archived pregnancy samples (2015, 2018, 2020)
 - How did the mercury data look in ACE populations?
 - Mercury concentrations were elevated compared to national levels.
 - In CARES data, there appears to be a high correlation between mercury levels and higher molecular weight PFAS (e.g., PFUdA, PFDA) levels.

Action Items

- None

Item 6. Bioaccumulation Monitoring Program Realignment Update

The implementation of the [Bioaccumulation Monitoring Program Realignment](#) is underway. The San Diego Region is wrapping up the 2021-2023 Realignment Cycle and the San Francisco Region is preparing to begin the 2024-2026 Realignment Cycle (see [Realignment Plan Update](#) for context, our decision criteria, etc.). This agenda item will include an update on progress and next steps.

Discussion

- See [slides](#) (66-71) and [recording](#) for full discussion
- San Diego Realignment (2021-2023)
 - Products & Accomplishments: 2021-2022
 - Advisory Committee Meetings
 - [Conducted monitoring](#) according to priorities identified in the [2022 Monitoring and Analysis Workplan](#)
 - Developed a [Communication and Outreach Plan](#)
 - Drafted a [Summary of Long-term Committee Recommendations](#)
 - Goals (2023)
 - Determine what partnership looks like outside of Realignment Process
 - Write up Data Report summarizing 2022 monitoring results
- San Francisco Realignment (2024-2026)
 - Preparation: 2023
 - Tribal engagement and outreach
 - Preparation meetings with Regional Board Coordinators
 - Select first 2024 meeting date, location - TBD

Action Items

- **San Francisco Region Tribes and Community-Based Organizations:** If you would like to participate in or stay informed of the process, please email anna.holder@waterboards.ca.gov

Item 7. 2024 Long-term Monitoring Priorities Assessment Process

This group has been discussing the long-term monitoring priorities assessment planned for 2024 in some capacity since Jan 2021. During the Oct 2022 meeting, the STEW requested more specific prompts that Regional coordinators can use to prepare for discussions in 2024. A draft of these prompts was made available in Jan 2023 (see [Water Boards Template](#) and [External Partner Template](#)). An update on the more solidified meeting and discussion plan will be presented.

STEW Co-chairs propose scheduling *additional* STEW meetings to support the need for more advanced timelines for permitting processes. Date ranges to be considered during this item include:

- The week of Nov 27 - Dec 1, 2023
- The week of Dec 18 - 22, 2023
- The week of Jan 22 - 26, 2024
- The week of Feb 26 - 29, 2024
- The week of Mar 25 - 29, 2024
- The week of Apr 15 - 19, 2024

PRE-MEETING ACTION ITEM: Please review your calendar *before* the meeting and be able to vote on which of the above date range(s) you would prefer for the additional STEW meeting(s).

Discussion

- See [slides](#) (72-82) and [recording](#) for full discussion
- Anna provided an overview of historical program monitoring locations and analytes, as well as topics and limitations to consider during the Long-term Monitoring Priorities Assessment Process - including hearing from Water Boards, Tribal, Agency, and Community-based Organization partners about their future bioaccumulation monitoring priorities and needs.
- Potential program changes under consideration that will be discussed in more detail during the Long-term Monitoring Priorities Assessment Process
 - Continue regular statewide monitoring of lakes, reservoirs and coastal areas, but move monitoring of rivers and streams to Realignment efforts and/or when partners can contribute to monitoring and analysis
 - Reduce mercury and selenium analyses to by requests only, and make core analyses at every location and for every species include PFAS
- Long-term Monitoring Priorities Assessment Process
 - Get a better understanding of the long-term (5-10 years) monitoring and analysis needs and priorities of the bioaccumulation monitoring partners and larger community
 - Make general plans for Statewide SWAMP Bioaccumulation Monitoring over the next 5 years
 - Make more specific plans for Statewide SWAMP Bioaccumulation Monitoring for 2025 and 2026
- Review and comparison of [Water Boards Template](#) and [External Partner Template](#)
 - **WATER BOARDS: TEMPLATE REQUIRED; MUST BE SUBMITTED BY NOV 30**
 - **Tribes / Agencies / Orgs: Templates Optional**
- Zoom Polls & Results (22 Poll Participants; **top two responses bolded**)
 - Would you prefer the themed meetings or random presentations based on availability? (select 1)
 - **36% - Themed (presenters in a meeting represent a single group)**
 - 14% - Random (presenters in a meeting represent multiple groups)
 - **41% - No Preference**
 - 9% - Abstain
 - When would you prefer to have additional STEW meetings scheduled to discuss? (select all that apply)
 - 23% - The week of Nov 27 - Dec 1, 2023
 - **36% - The week of Dec 18 - 22, 2023**
 - **36% - The week of Jan 22 - 26, 2024**
 - **45% - The week of Feb 26 - 29, 2024**
 - 23% - The week of Mar 25 - 29, 2024
 - 23% - The week of Apr 15 - 19, 2024
 - 23% - No Preference
 - 9% - Abstain

- 0% - I don't want / will not attend additional meetings
 - If we are going to meet more frequently I would prefer each meeting be less than...(select 1)
 - 0% - 4 hours
 - **32% - 3 hours**
 - **36% - 2 hours**
 - 9% - 1.5 hours
- 0% - No Preference
 - 14% - Other - the meetings should be as long as they need to be to optimize presenter availability
 - 9% - Abstain
- Discussion
 - Note that it would be helpful to have all Water Board representatives to present at the same meeting so it's easier to understand the needs of the entire Water Boards organization, even if it means making that meeting longer than two or three hours.
 - Note that permitting timelines require monitoring plans (locations, species) to be completed and submitted for permits almost an entire year before monitoring takes place. Strongly recommended that discussions begin and initial decisions about which locations and species should be added to permits are made much sooner than Feb/Mar 2024.

Action Items

- All: Review appropriate meeting template, begin documenting long-term needs and priorities and be ready to discuss
- **Water Boards:** Complete the [Water Boards Template](#), email copy to anna.holder@waterboards.ca.gov by **Nov 30**
- All: Email anna.holder@waterboards.ca.gov to schedule your presentation
- Anna: Schedule Zoom meetings based on poll results, add meeting information to [Meetings page](#) and distribute announcements and reminders via STEW email list.
- All: Register for Zoom calls, download calendar invites

Item 8. 2024 STEW Meeting Dates

Since 2020, the STEW has scheduled standing quarterly meetings, the majority of which have been from 9:30 am - 12:30 pm on the last Wed of the month in Jan, Apr, Jul, Oct, and held over Zoom. During this meeting we will check-in with the STEW on how this has been working for attendees, and make a plan for when and how we will meet in 2024.

STEW Co-chairs propose:

- We continue to meet over Zoom to reduce travel costs for attendees and increase the ability for more people to participate.
- 2024 meetings to be scheduled from 9:30 am - 12:30 pm on the last Wed of the month in Jan, Apr, Jul, Oct. Specific dates are: Jan 31, Apr 24, Jul 31, Oct 30.

Discussion

- See [slides](#) (83-84) and [recording](#) for full discussion
- Zoom Polls & Results (22 Poll Participants; **top two responses bolded**)
 - I would like to continue meeting over Zoom (select 1)
 - **91% - Agree**
 - 0% - No Preference
 - 0% - Disagree
 - **9% - Abstain**
 - I am OK with continuing to hold 9:30 am - 12:30 pm for STEW Meetings (select 1)
 - **91% - Agree**
 - 0% - No Preference
 - 0% - Disagree
 - **9% - Abstain**
 - I am OK with continuing to meet on the last Wed. of the month in Jan, Apr, Jul, Oct. [Jan 31, Apr 24, Jul 31, Oct 30] (select 1)
 - **82% - Agree**
 - **9% - No Preference**
 - 0% - Disagree
 - **9% - Abstain**
 - I would like to be able to register for STEW Meetings so that I can download a calendar hold/invitation. (select 1)
 - **55% - Agree**
 - **41% - No Preference**
 - 0% - Disagree
 - 4% - Abstain

Action Items

- Anna: Schedule Zoom meetings based on poll results, add meeting information to [Meetings page](#) and send to STEW email list once complete
- All: Register for Zoom calls, download calendar invites

Item 9. Wrap-up and Adjourn

- Review action items
- Review items for next meeting

Discussion

- See [slides](#) (85-91) and [recording](#) for full discussion

Action Items

- Anna: Post meeting materials and recording on the [Meetings page](#), send to STEW email list once complete
- All: Email anna.holder@waterboards.ca.gov with future STEW meeting speaker/topic recommendations